

Date: Wednesday, 5/23/2007 4:11:01 PM
User: Kim Johnston

Process Sheet

Customer : CU-DAR001 Dart Helicopters Services	Drawing Name : GPS RECEIVER HOUSING
Job Number : 32538	
Estimate Number : 12495	
P.O. Number : <u>N/A</u>	Part Number : D35149
This Issue : 5/23/2007 S.O. No. : <u>N/A</u>	Drawing Number : <u>UNDER REVIEW</u> (B 07.05.24)
Prsht Rev. : NC	Project Number : N/A
First Issue : <u>N/A</u> Type : SMALL /MED FAB	Drawing Revision : N/A
Previous Run : 28420	Material : <u>N/A</u>
Written By : _____	Due Date : 5/30/2007 Qty: 4 Um: Each
Checked & Approved By : <u>07.05.24</u>	
Comment : Est Rev:A New Issue 06-07-26 JLM	

Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :
---------	-----------------------	---------------

1.0	M6061T6S040	6061-T6 .040 Sheet
-----	-------------	--------------------



Comment: Qty.: 0.1969 sf(s)/Unit Total : 0.7875 sf(s)
6061-T6 .040 Sheet
(M6061T6S040)
Batch: ML02723 07 05 29

(4)

2.0	WATER JET	FLOW WATER JET
-----	-----------	----------------



Comment: FLOW WATER JET
1-Cut as per Dwg D3514
Dwg Rev: Prel
Prog Rev: Prel

ml 07 05 29

(4)

Ensure Grain Direction is correct**

2-Deburr if necessary

3.0	QC2	INSPECT PARTS AS THEY COME OFF MACHINE
-----	-----	--



ml 07 05 29

(4)

Comment: INSPECT PARTS AS THEY COME OFF MACHINE

4.0	QC8	SECOND CHECK
-----	-----	--------------



07.05.29 4

Comment: SECOND CHECK

5.0	BRAKE NC	NC BRAKE
-----	----------	----------



Comment: NC BRAKE
Form Joggle as per Dwg D3514

SB 07 105 / 80

(4)

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes ☐ No ☒ DQA: ☒ Date: 07/05/13
 QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Wednesday, 5/23/2007 4:11:01 PM
User: Kim Johnston

Process Sheet

Cust#mer: CU-DAR001 Dart Helicopters Services

Drawing Name: GPS RECEIVER HOUSING

Job Number: 32538

Part Number: D35149

Job Number:



Seq. #:

Machine Or Operation:

Description :

6.0

QC5

INSPECT WORK TO CURRENT STEP



0705-30 (4)



Comment: INSPECT WORK TO CURRENT STEP

7.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Chemical Conversion Coat as per QSI 005 4.1

AD

0705-30

(4)

8.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

ml 07/05/30

(x4)

9.0

PACKAGING 1

PACKAGING RESOURCE #1



ENG APPROVAL

07-05-31



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: GA

ml 07/05/30 (X3)

7/5/30

(4) 50

10.0

QC21

FINAL INSPECTION/W/O RELEASE



51144

7/5/30

59



Comment: FINAL INSPECTION/W/O RELEASE

07/05/31

(4)

Job Completion



070531 (4)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

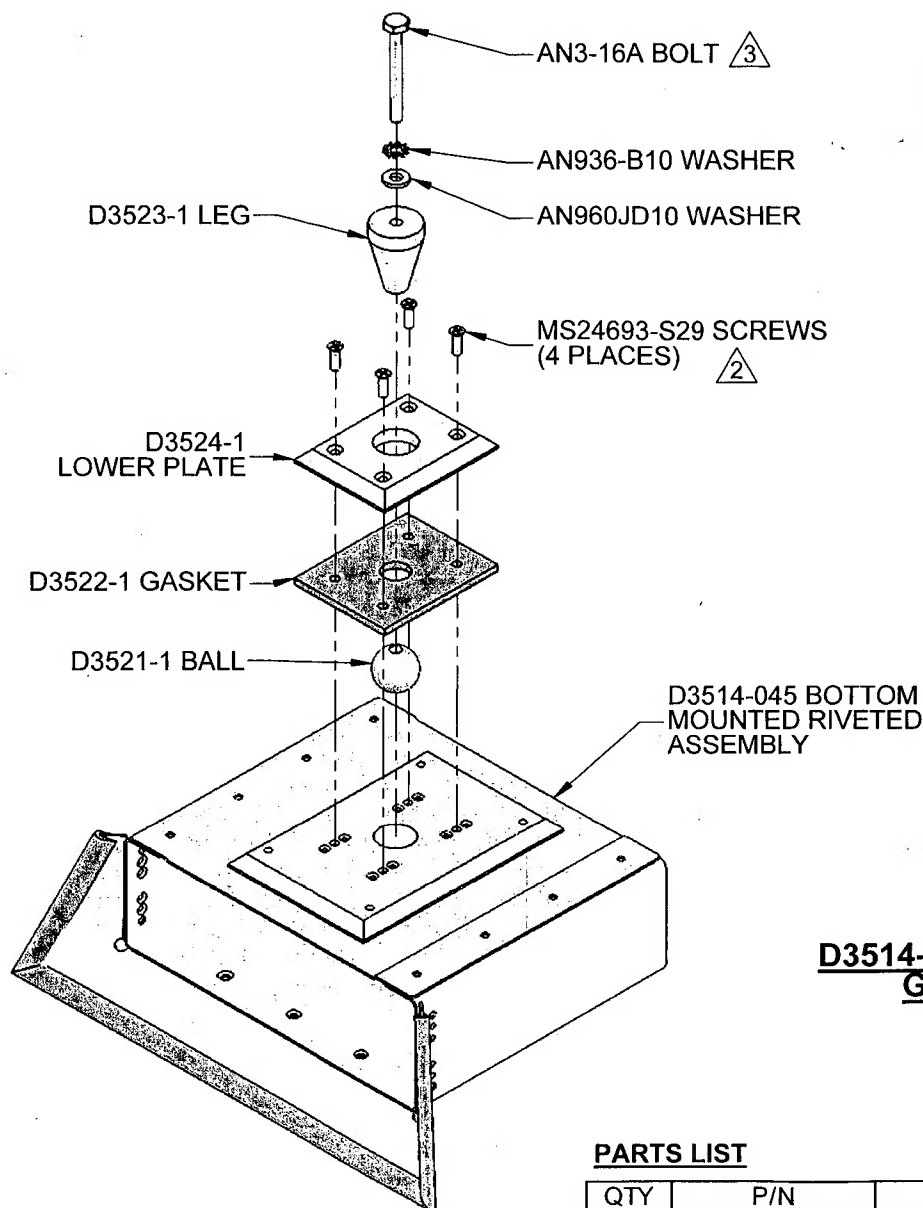
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DESIGN CB	DRAWN BY CB	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED PH	APPROVED	DRAWING NO. D3514	REV. A SHEET 1 OF 9
DATE 07.01.10		TITLE GPS RECEIVER HOUSING	SCALE 1:3



PRELIMINARY ISSUE

UNDER REVIEW
07.05.24CB

SHOP COPY
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ENGINEERING
D3514-041 BOTTOM MOUNTED GIMBAL ASSEMBLY
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SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. **32538**

PARTS LIST

QTY	P/N	DESCRIPTION
X	D3514-041	BOTTOM MOUNTED GIMBAL ASSEMBLY
1	D3514-045	BOTTOM MOUNTED HOUSING ASSEMBLY
1	D3521-1	BALL
1	D3522-1	GASKET
1	D3523-1	LEG
1	D3524-1	LOWER PLATE
1	AN3-16A	BOLT
1	AN936-B10	WASHER
1	AN960JD10	WASHER
4	MS24693-S29	SCREWS

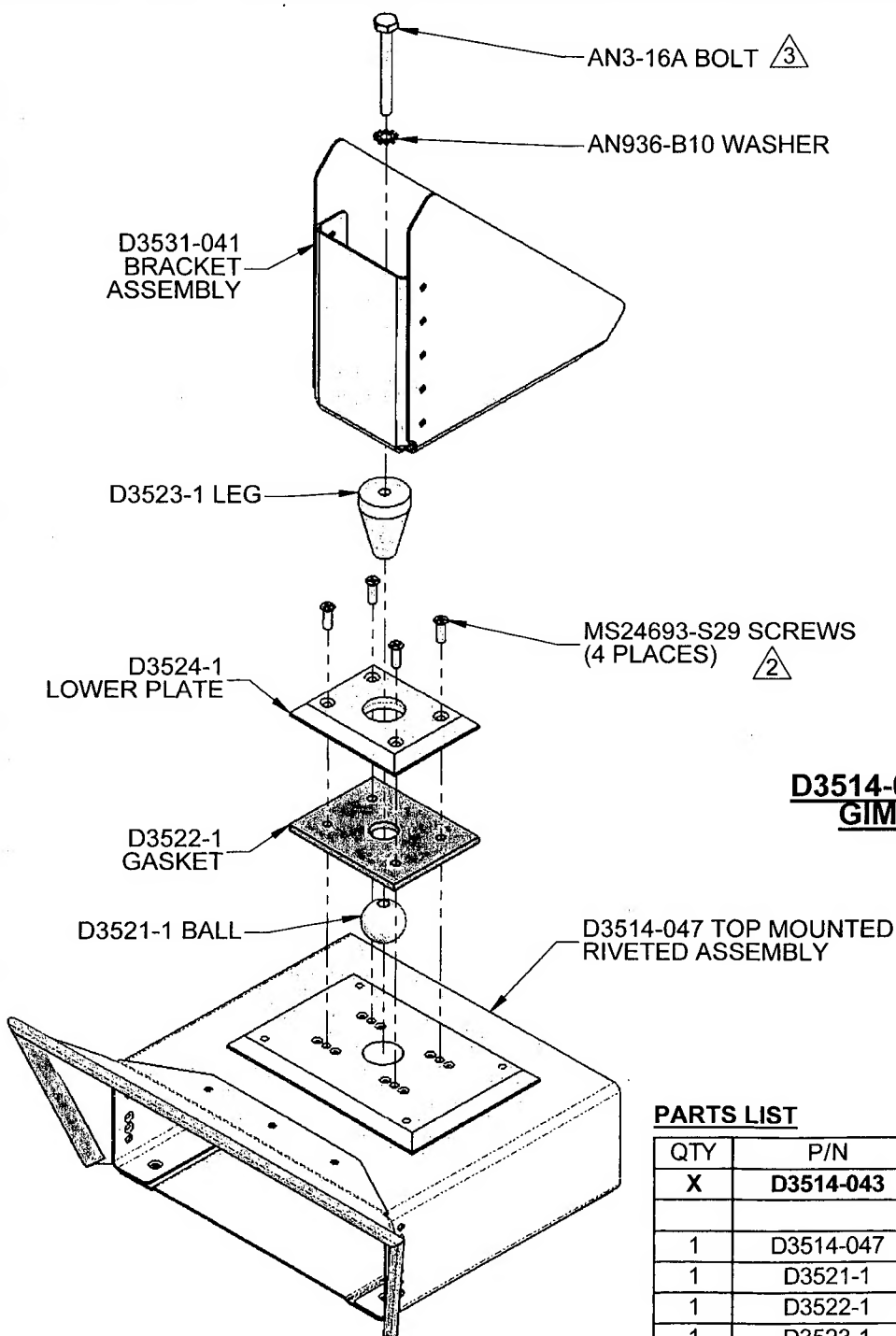
NOTE:

- 1) ASSEMBLE PER DART QSI 003
- 2) TORQUE SCREWS TO 5-6 in-lbs
- 3) TIGHTEN TO SNUG FIT ONLY
- 4) IDENTIFY WITH DART P/N "D3514-041" USING A WHITE MARKER

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DATE 07.01.10		TITLE GPS RECEIVER HOUSING	SCALE 1:3



PRELIMINARY ISSUE

UNDER REVIEW

07.05.24CB

**D3514-043 TOP MOUNTED
GIMBAL ASSEMBLY**

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32538

PARTS LIST

QTY	P/N	DESCRIPTION
X	D3514-043	TOP MOUNTED GIMBAL ASSEMBLY
1	D3514-047	TOP MOUNTED HOUSING ASSEMBLY
1	D3521-1	BALL
1	D3522-1	GASKET
1	D3523-1	LEG
1	D3524-1	LOWER PLATE
1	D3531-041	BRACKET ASSEMBLY
1	AN3-16A	BOLT
1	AN936-B10	WASHER
4	MS24693-S29	SCREWS

NOTE:

- 1) ASSEMBLE PER DART QSI 003
- 2) TORQUE SCREWS TO 5-6 in-lbs
- 3) TORQUE BOLTS TO 15-25 in-lbs
- 4) IDENTIFY WITH DART P/N "D3514-043" USING A WHITE MARKER

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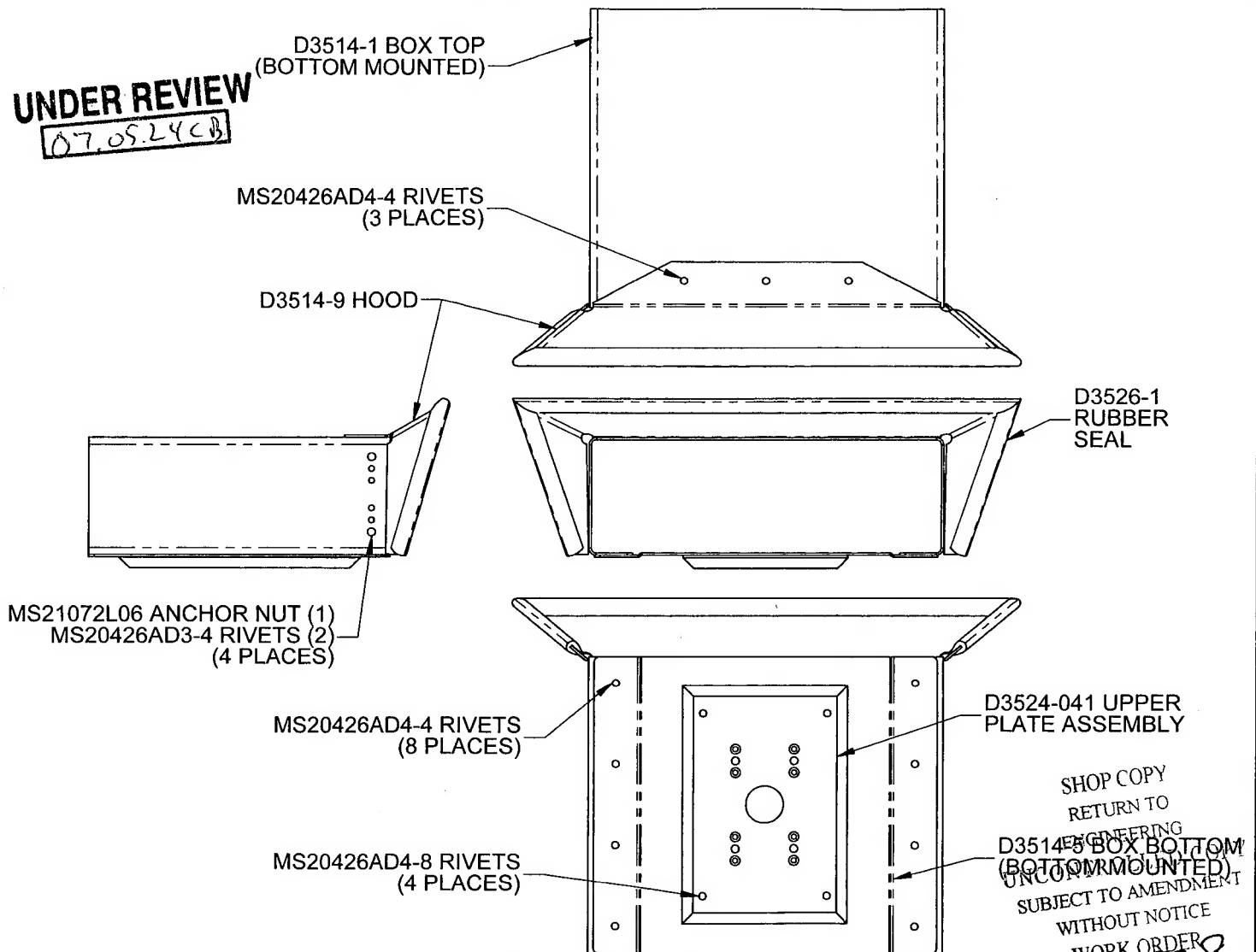
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DATE 07.01.10		TITLE GPS RECEIVER HOUSING	SCALE 1:3
REV A	DATE 07.01.10	DESCRIPTION NEW ISSUE	

UNDER REVIEW

07.05.24CB



D3514-045 BOTTOM MOUNTED HOUSING ASSEMBLY

NOTES:

- 1) POWDER COAT ASSEMBLY BLACK SANDTEX (4.3.5.7) PER DART QSI 005 4.3.
- 2) ASSEMBLE PER DART QSI 003

PARTS LIST

QTY	P/N	DESCRIPTION
X	D3514-045	BOTTOM MOUNTED HOUSING ASSEMBLY
1	D3514-1	BOX TOP (BOTTOM MOUNTED)
1	D3514-5	BOX BOTTOM (BOTTOM MOUNTED)
1	D3514-9	HOOD
1	D3524-041	UPPER PLATE ASSEMBLY
1	D3526-1	RUBBER SEAL
8	MS20426AD3-4	RIVET
11	MS20426AD4-4	RIVET
4	MS20426AD4-8	RIVET
4	MS21072L06	ANCHOR NUT

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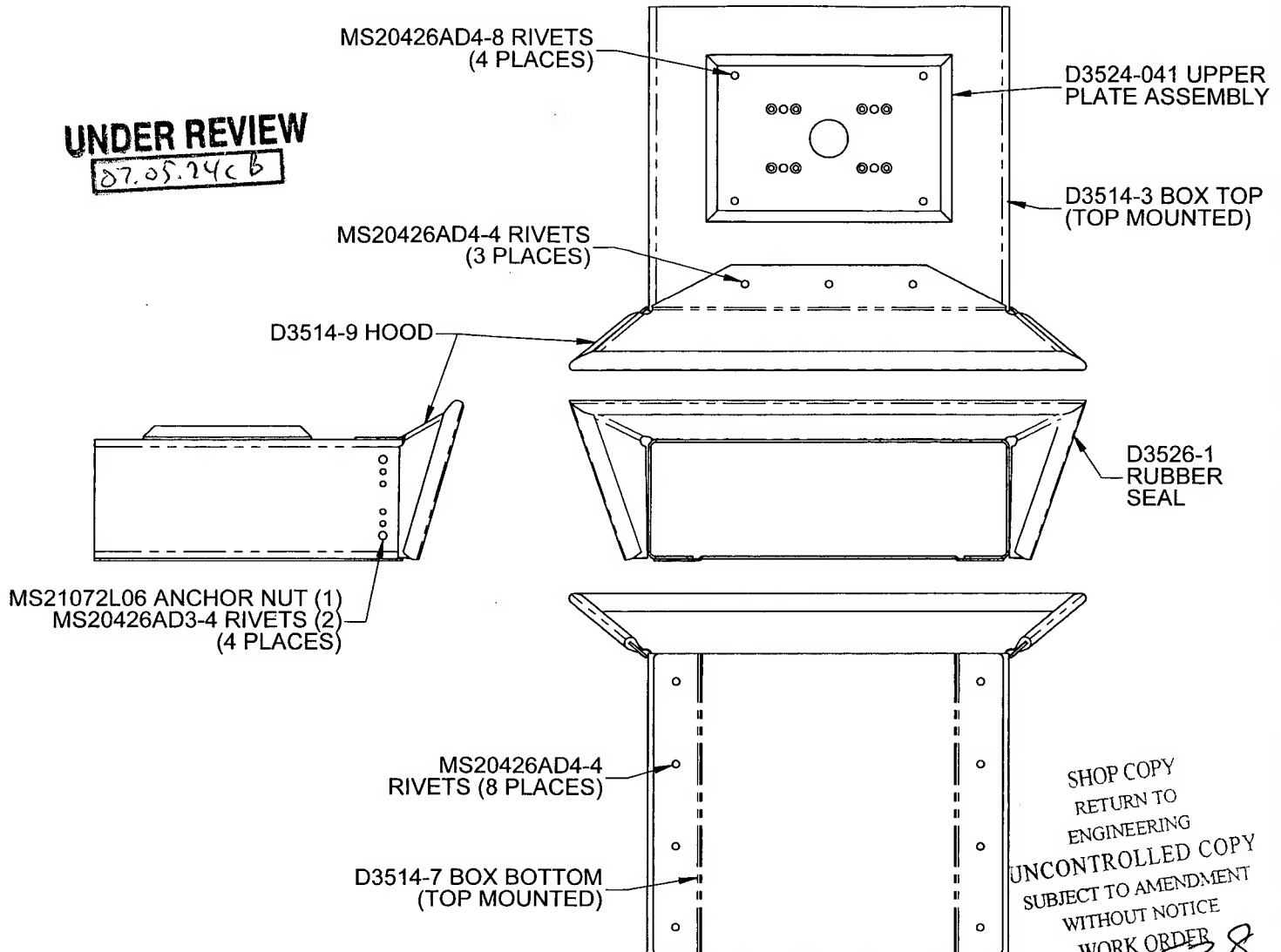
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UNDER REVIEW

07.05.24CB



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**D3514-047 TOP MOUNTED
HOUSING ASSEMBLY**

NOTES:

- 1) POWDER COAT ASSEMBLY BLACK
SANDTEX (4.3.5.7) PER DART QSI 005 4.3.
- 2) ASSEMBLE PER DART QSI 003

PARTS LIST

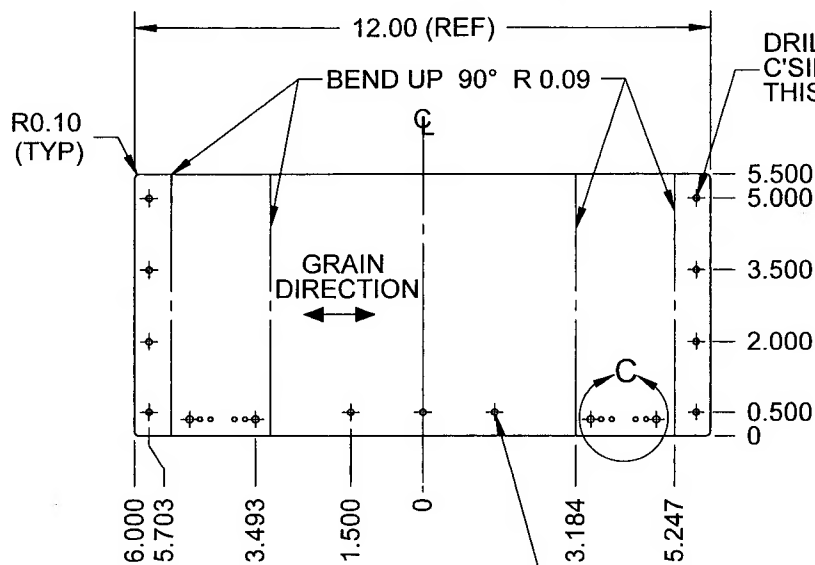
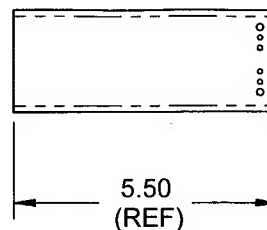
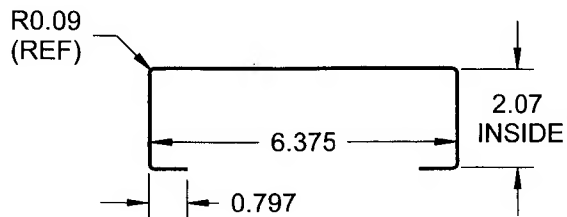
QTY	P/N	DESCRIPTION
X	D3514-047	TOP MOUNTED HOUSING ASSEMBLY
1	D3514-3	BOX TOP (TOP MOUNTED)
1	D3514-7	BOX BOTTOM (TOP MOUNTED)
1	D3514-9	HOOD
1	D3524-041	UPPER PLATE ASSEMBLY
1	D3526-1	RUBBER SEAL
8	MS20426AD3-4	RIVET
11	MS20426AD4-4	RIVET
4	MS20426AD4-8	RIVET
4	MS21072L06	ANCHOR NUT

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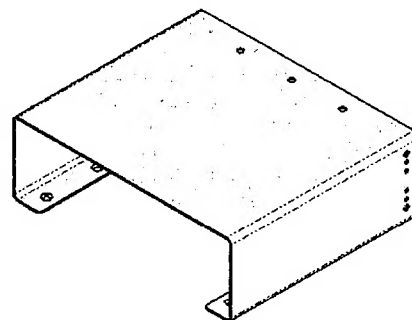
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DATE 07.01.10		TITLE GPS RECEIVER HOUSING	SCALE 1:4



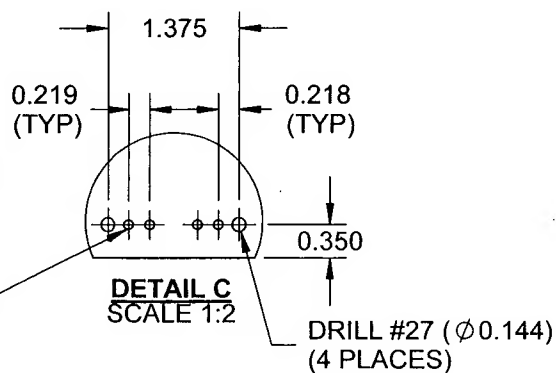
DRILL #30 ($\phi 0.129$)
C'SINK $\phi 0.230 \times 100^\circ$
THIS SIDE (8 PLACES)



**D3514-1F
FLAT PATTERN**

DRILL #30 ($\phi 0.129$)
C'SINK $\phi 0.230 \times 100^\circ$
THIS SIDE (3 PLACES)

DRILL #40 ($\phi 0.098$)
C'SINK $\phi 0.182 \times 100^\circ$ THIS SIDE
(8 PLACES) FOR RIVETS



UNDER REVIEW
07.05.24CB

D3514-1 BOX TOP (BOTTOM MOUNTED)

NOTES:

- 1) MATERIAL: ALUMINUM 6061-T6/T62 SHEET, 0.040 THICK PER QQ-A-250/11 OR AMS 4025 OR AMS 4027 (REF DART SPEC M6061T6S.040)
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED
- 5) BREAK ALL SHARP CORNERS TO 0.010 MAX
- 6) PART IS SYMMETRIC ABOUT ϕ
- 7) C'SINKS ARE ON THE INSIDE OF PART (AFTER BENDING)

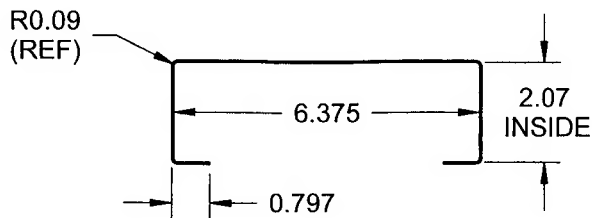
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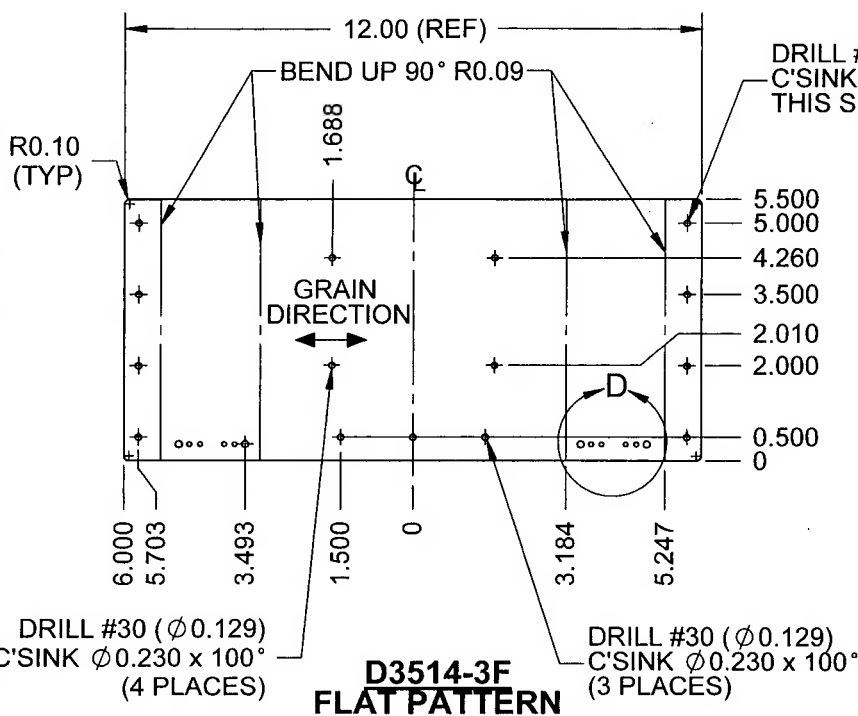
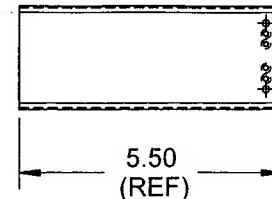
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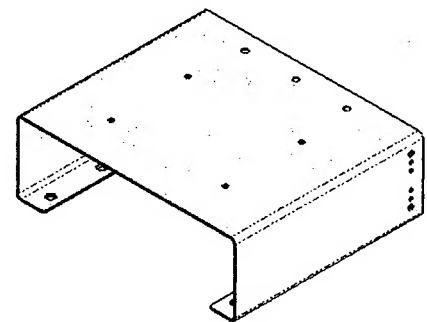
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DATE 07.01.10	TITLE GPS RECEIVER HOUSING SCALE 1:4		



**D3514-3
BEND DETAIL**

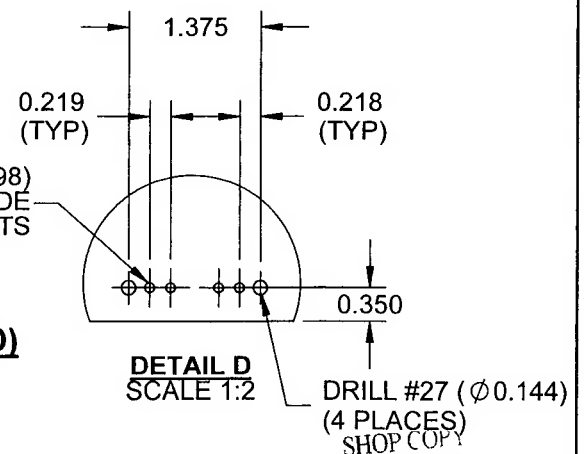


**D3514-3F
FLAT PATTERN**



UNDER REVIEW
07.05.14 CB

D3514-3 BOX TOP (TOP MOUNTED)



NOTES:

- 1) MATERIAL: ALUMINUM 6061-T6/T62 SHEET, 0.040 THICK PER QQ-A-250/11 OR AMS 4025 OR AMS 4027 (REF DART SPEC M6061T6S.040)
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED
- 5) BREAK ALL SHARP CORNERS TO 0.010 MAX
- 6) PART IS SYMMETRIC ABOUT ϕ
- 7) C'SINKS ARE ON THE INSIDE OF PART (AFTER BENDING)

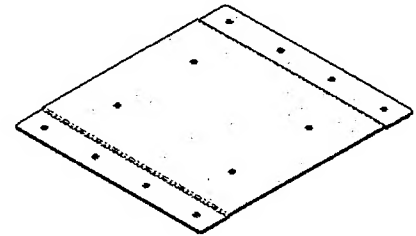
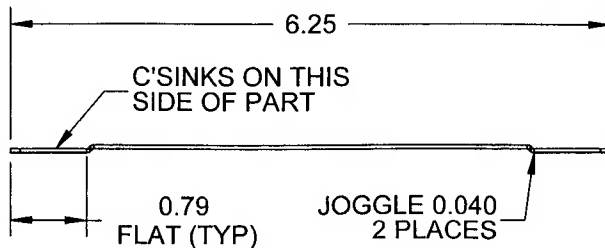
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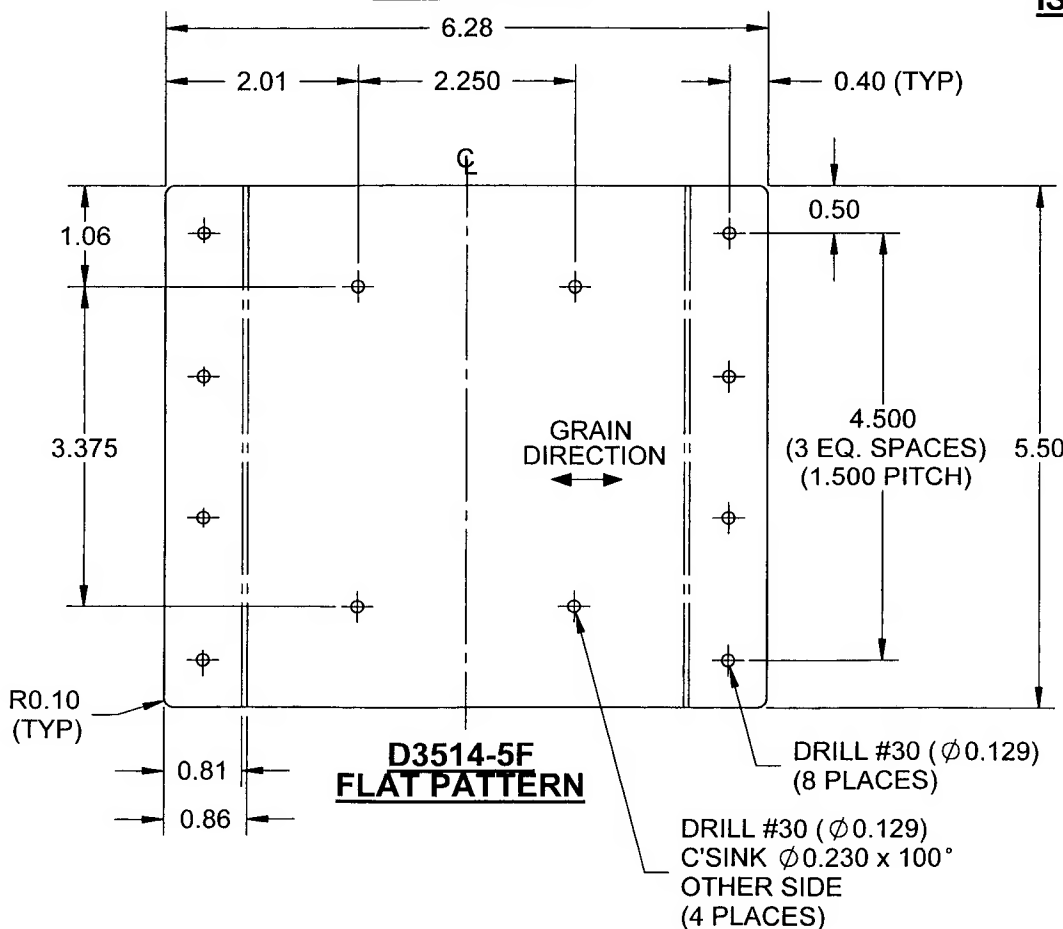
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CHECKED PH	APPROVED [Signature]	DRAWING NO. D3514	REV. A SHEET 7 OF 9
DATE 07.01.10		TITLE GPS RECEIVER HOUSING SCALE 1:2	



ISOMETRIC VIEW
SCALE 1:4

**D3514-5
BEND DETAIL**



UNDER REVIEW

07.05.24CB

**D3514-5F
FLAT PATTERN**

D3514-5 BOX BOTTOM (BOTTOM MOUNTED)

NOTES:

- 1) MATERIAL: ALUMINUM 6061-T6/T62 SHEET, 0.040 THICK PER QQ-A-250/11 OR AMS 4025 OR AMS 4027 (REF DART SPEC M6061T6S.040)
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED
- 5) BREAK ALL SHARP CORNERS TO 0.010 MAX
- 6) PART IS SYMMETRIC ABOUT ϕ
- 7) C'SINK BELOW JOGGLE

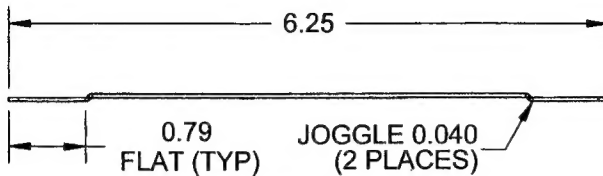
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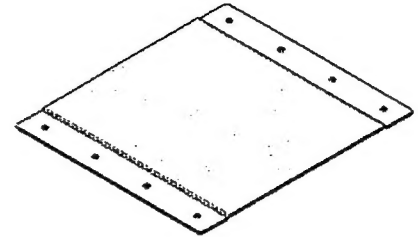
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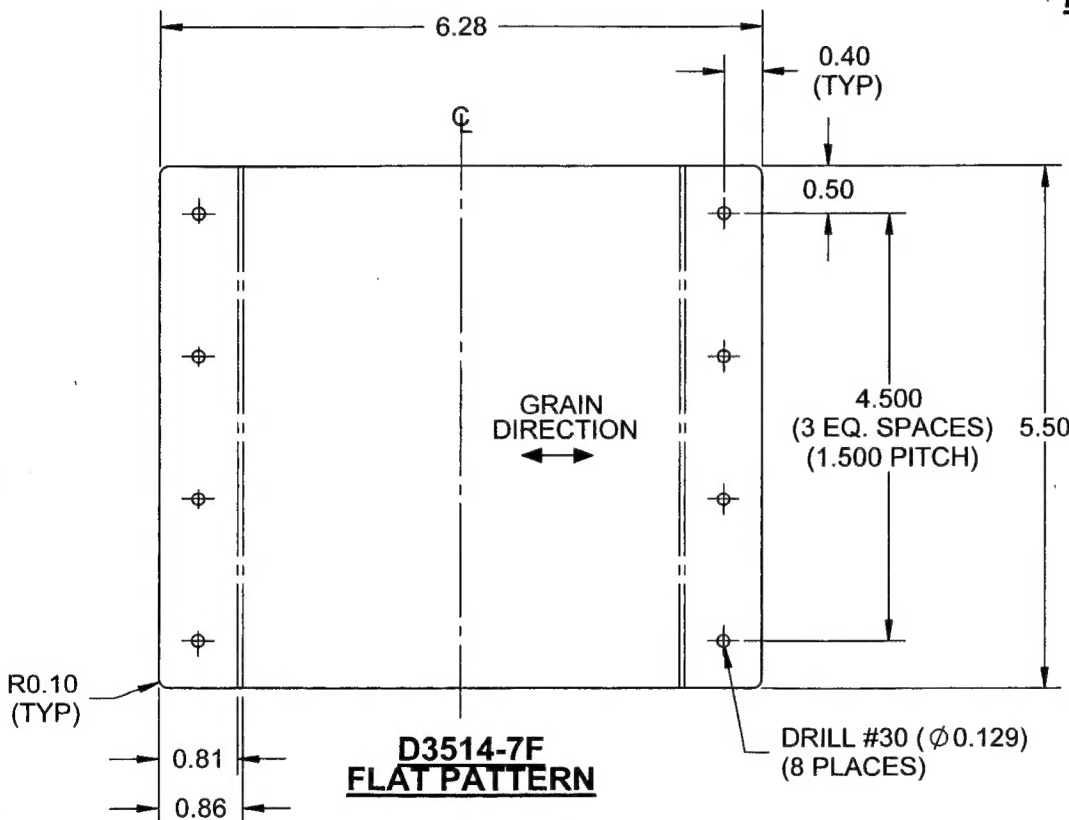
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DATE 07.01.10		TITLE GPS RECEIVER HOUSING	SCALE 1:2



**D3514-7
BEND DETAIL**



**ISOMETRIC VIEW
SCALE 1:4**



**D3514-7F
FLAT PATTERN**

UNDER REVIEW

07.05.2006

D3514-7 BOX BOTTOM (TOP MOUNTED)

NOTES:

- 1) MATERIAL: ALUMINUM 6061-T6/T62 SHEET, 0.040 THICK PER QQ-A-250/11 OR AMS 4025 OR AMS 4027 (REF DART SPEC M6061T6S.040)
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED
- 5) BREAK ALL SHARP CORNERS TO 0.010 MAX
- 6) PART IS SYMMETRIC ABOUT ϕ

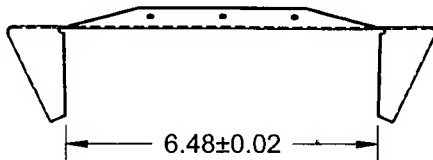
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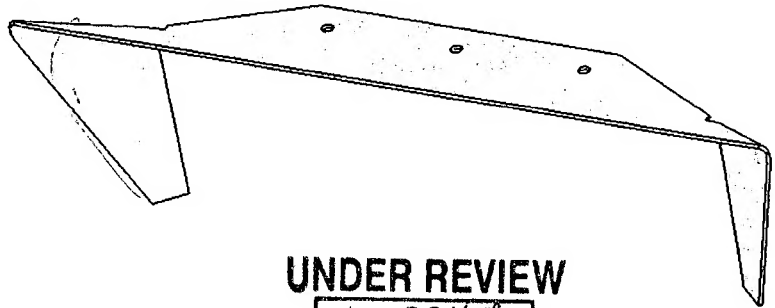
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DATE 07.01.10	TITLE GPS RECEIVER HOUSING		SCALE 1:2



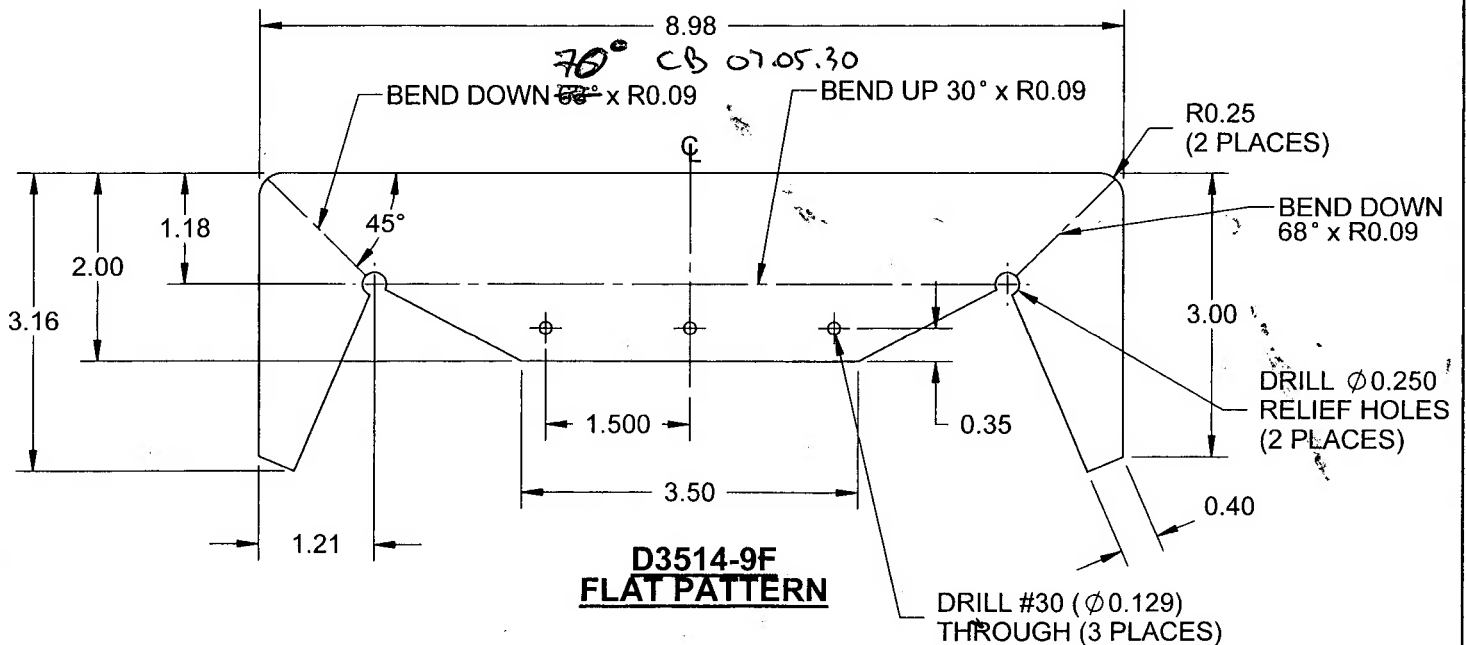
FRONT VIEW
SCALE 1:4



UNDER REVIEW

07.05.24 CB

**D3514-9
BEND DETAIL**



**D3514-9F
FLAT PATTERN**

D3514-9 HOOD

NOTES:

- 1) MATERIAL: ALUMINUM 6061-T6/T62 SHEET, 0.040 THICK PER QQ-A-250/11 OR AMS 4025 OR AMS 4027 (REF DART SPEC M6061T6S.040)
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED
- 5) BREAK ALL SHARP CORNERS TO 0.010 MAX
- 6) PART IS SYMMETRIC ABOUT ϕ

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DART AEROSPACE LTD		Work Order: 32538
Description: GPS Receiver Housing		Part Number: D3514-9
Inspection Dwg: D3514	Rev: Pre1	Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

Inspection Sheet Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
A $\phi 0.129$	+0.005-0.001	0.133	✓		VERN	
B 8.98	+/-0.030	8.987	✓		VERN	
C 3.00	+/-0.030	3.00	✓		VERN	
D 0.40	+/-0.030	0.400	✓		VERN	
E 1.500	+/-0.010	1.500	✓		VERN	
F 3.50	+/-0.030	3.50	✓		VERN	
G $\phi 0.250$	+0.005-0.001	0.250	✓		VERN	
H R0.25	+/-0.030	R0.25	✓		VERN	
I						
J						
K						
L						
M						
N						
O						
P						
Q						
R						
S						
T						
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Measured by: <i>mm mm</i>	Audited by: <i>[Signature]</i>	Prototype Approval: <i>[Signature]</i>
Date: 02 05 29	Date: 02 05 29	Date: <i>[Signature]</i>
Rev	Date	Change
		New Issue
Revised by		Approved
KJ/RF		